

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

THE SPECIFICATION

The specification has been amended to delete reference numeral "1a" which is not shown in the drawings, and to delete reference character "A" which, as recognized by the Examiner, is not shown in the drawings.

In addition, the abstract has been amended to remove the reference numerals mentioned therein. Accordingly, it is respectfully pointed out that the Examiner's objection to reference numeral 6 in the abstract is now moot.

The specification and the abstract have also been amended to make some minor grammatical improvements.

No new matter has been added, and it is respectfully requested that the amendments to the specification be approved and entered, and that the objection to the specification as well as the drawings be withdrawn.

THE DRAWINGS

Fig. 3 has been amended to delete reference numerals 17 and 18. Reference numeral 18 is not mentioned in the specification, and reference numeral 17 is only mentioned in the

specification in connection with the use of reference numeral 17 in Figs. 4A and 4B.

Submitted herewith are a corrected sheet of formal drawing which incorporates the amendments and an annotated sheet showing the changes made thereto.

No new matter has been added, and it is respectfully requested that the amendments to the drawings be approved and entered.

THE CLAIMS

The claims have been amended to make some minor clarifying amendments. In particular, claim 1 has been amended to even more clearly recite that the flow sensor is interposed in the path to detect a flow rate of a fluid running through the path, and to even more clearly recite that the housing is fixable to a given panel. In addition, the claims have been amended to change "path block body" to "main body."

No new matter has been added, and it is respectfully requested that the amendments to the claims be approved and entered.

It is respectfully submitted, moreover, that the amendments to the claims are not related to patentability, and do not narrow the scope of the claims either literally or under the doctrine of equivalents.

THE PRIOR ART REJECTION

Claims 1-8 were rejected under 35 USC 103 as being obvious in view of the combination of JP 2592418 and JP 09-089618. These rejections, however, are respectfully traversed.

According to the present invention as recited in independent claim 1, a flow detector is provided which comprises: a main body which forms a given path; a flow sensor interposed in the path to detect a flow rate of a fluid running through the path; and a circuit board having mounted thereon an electric circuit which measures the flow rate of the fluid running through the path by using the flow sensor.

In addition, according to the present invention as recited in independent claim 1, the main body and the circuit board are accommodated in a rectangular parallelepiped or cubic housing, which is fixable to a given panel.

Still further, according to the present invention as recited in independent claim 1: (i) an indicator and an operation switch are provided in a front surface portion of the housing that is exposed at a front surface of the given panel when the housing is fixed to the given panel; (ii) an inlet and an outlet of the path are provided in a back surface portion of the housing; and (iii) a terminal for external connection of the circuit board is provided in the back surface portion of the housing.

With this structure, a flow detector and a flow controller can be provided in such a manner that it is possible to arrange a plurality of flow detectors and flow controllers close to each other, and facilitate connecting pipes to fluid inlets and fluid outlets, as well as to facilitate connecting an electrical signal wire, for example, to a terminal. That is, with the structure of the present invention as recited in claim 1, even if a plurality of flow detectors and flow controllers are arranged on a given panel, it is possible to efficiently place the detectors and the controllers close to each other and to carry out the work of connecting pipes to the fluid inlet and outlet and of connecting an electrical signal wire, for example, to the terminal on a back surface portion the housing of the detector and controller.

As recognized by the Examiner, JP 2592418 discloses a gas meter that measures a flow rate of gas, which enters from a gas inlet, runs through an airtight gas path and flows out from a gas outlet, by using a flow sensor interposed in the gas path. JP 09-089618, moreover, which the Examiner has cited for the disclosure of a terminal for external connection provided for a circuit board, discloses a flow detection switch capable of comparing a flow rate of a fluid running through a path with a predetermined reference flow rate, and controlling external devices according to the result of the comparison.

It is respectfully submitted, however, that neither JP 2592418 nor JP 09-089618 discloses, teaches or suggests fixing the gas meter (JP 2592418) or flow detection switch (JP 09-089618) to a given panel. And it is respectfully submitted that JP 2592418 and JP 09-089618 clearly do not disclose, teach or suggest the structure recited in independent claim 1 whereby the main body and the circuit board of the flow detector are accommodated in a rectangular parallelepiped or cubic housing, which is fixable to a given panel, and whereby: (i) an indicator and an operation switch are provided in a front surface portion of the housing that is exposed at a front surface of the given panel when the housing is fixed to the given panel; (ii) an inlet and an outlet of the path are provided in a back surface portion of the housing; and (iii) a terminal for external connection of the circuit board is provided in the back surface portion of the housing.

Accordingly, it is respectfully submitted that even if JP 2592418 and JP 09-089618 were combinable in the manner suggested by the Examiner, the structural features and advantageous effects of the present invention as recited in independent claim 1 still would not be achieved or rendered obvious.

In view of the foregoing, it is respectfully submitted independent claim 1 and claims 2-8 depending therefrom clearly

patentably distinguish over JP 2592418 and JP 09-089618 under
35 USC 103.

RE: ERRORS IN THE PRE-GRANT PUBLICATION (PG-PUB)

At the fourth line of paragraph [0041] of the pre-grant
publication US 2006/0144137 A1 of the present application, "front
surface lob" should read "front surface 10b" in accordance with
page 10, line 23 of the specification as filed. It is
respectfully requested that this error be corrected when the
present application issues as a patent.

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Entry of this Amendment, allowance of the claims and the
passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or
recommendations, the Examiner is invited to telephone the
undersigned at the telephone number given below for prompt
action.

Respectfully submitted,

/Douglas Holtz/

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FIG. 3

